



Sea Otter Research

Lower Cook Inlet, Summer 2007

An Unusual Mortality Event

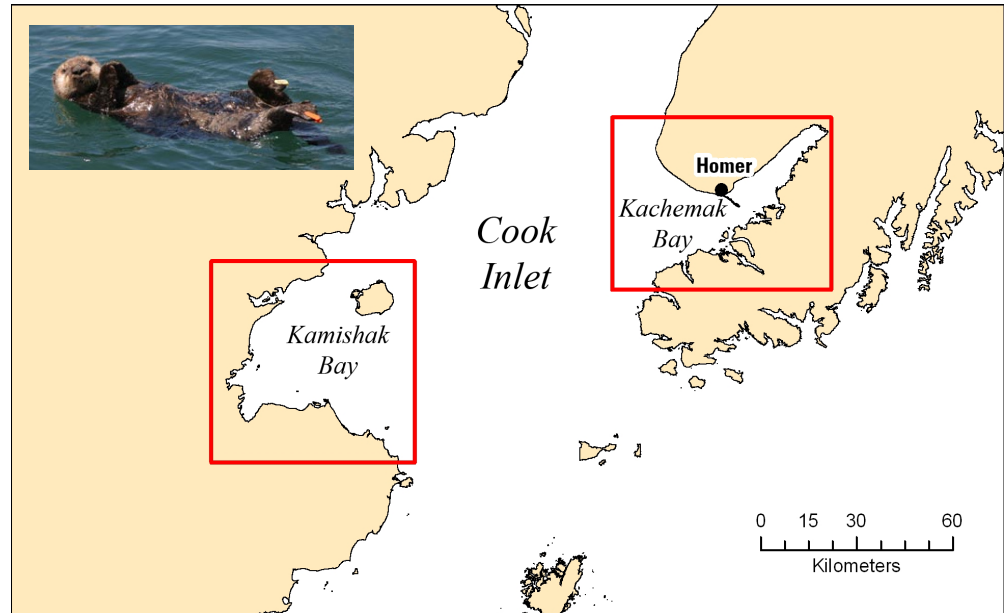
In August, 2006, the elevated sea otter mortality observed in lower Cook Inlet was declared to be an Unusual Mortality Event (UME). Since 2002, the number of dead otters exceeds numbers recorded for the previous 20 years for this area and an unusually high number of animals have died from valvular endocarditis and/or septicemia (see Feb 2007 Fact Sheet for details)

Research Planned

One avenue of research for summer 2007 involves capturing live sea otters in Kachemak and Kamishak bays, Alaska and screening for a variety of indices of health and disease. This study will help us understand potential or contributing causes to the mortality event such as 1) immunosuppression due to a viral infection, contaminants, or genetic predisposition/reduced variability; 2) viral or other pathogen infection which causes damage to tissue cells; 3) pre-existing valvular abnormality due to congenital defect (i.e., genetic) or other factors; or 4) something in the diet that causes damage to the digestive tract and release of the bacteria into the bloodstream. The results of the study will improve our understanding of why these otters are dying, increase our knowledge of the current health, condition, ecology, and the population status of sea otters. Objectives of the study include conducting specific tests of animal condition, screening for disease occurrence, and relating the results to annual survival for each sea otter in the study.

How Do We Capture Sea Otters?

There are a variety of methods for sea otter capture approved by the permitting office under the Marine Mammal Protection Act and the Institutional Animal Care and Use Committee. The primary capture method in this study will be unweighted nets either in open water or anchored perpendicular to shore. The nets have a floating cork line but no additional floats



Location of sea otter capture operations in Kamishak and Kachemak Bays, Alaska.

except for buoys at the ends of the net. Each buoy will be marked as property of the Fish and Wildlife Service (FWS). Sea otters traveling in the vicinity dive under the corkline, become entangled in the loose webbing, come to the surface and are then removed from the net by the capture crew.



Sea otters in a capture net.

How Are Sea Otters Monitored?

Once sea otters are captured, they are contained in capture boxes or a floating holding pen and kept cool and quiet. Qualified veterinarians will anesthetize the sea otters using approved protocols. Once the otter is anesthetized, the capture team records the animal's health and condition. The otter is tagged with a unique combination of colored and positioned flipper tags applied to the webbing of the hind flipper. A VHF radio transmitter is implanted in the abdominal cavity. Each radio transmitter has a frequency that is unique to each study animal. The study will monitor these otters for the next two years to determine their health, condition, and foraging patterns. Monitoring may occur by aircraft, skiff, or shore-based observation. Working collaboratively with the Kachemak Bay Research Reserve, FWS will be locating each sea otter in the study every 5-7 days.



Sea otters in a holding pen.



Flipper tags on a sea otter



A sea otter undergoing examination

How Can You Help?

During the capture operations, please stay clear of the nets, captured otters, and the support vessel while we are working with the animals. When we are removing otters from the net or transporting them, your questions may distract the crew and cause a health risk to the people and otters. If we have sea otters in a floating holding pen next to the support vessel, they may become agitated by additional skiff traffic.

Each otter will have a set of color-coded flipper tags. You may see these animals feeding, resting, or grooming in the Kachemak Bay area. You can help the study by reporting the date, time, location (GPS coordinates, if available), and the colors and numbers of the tags. You can report sightings of tagged sea otters to Ori Badajos (907-226-4662) at the Kachemak Bay Research Reserve, Islands and Oceans Visitor Center.

In addition to reporting sightings of live study animals, it is also very important to report dead sea otters. If you find a dead sea otter that has been tagged, it is very important to report the animal as soon as possible to the Fish and Wildlife Service or the Kachemak Bay Research Reserve. This will help us recover the otter quickly and increase our ability to determine the cause of death.

If you see a sick or dead sea otter call the U.S. Fish and Wildlife toll-free number (1-800-362-5148) during regular business hours, or the Alaska SeaLife Center's toll-free number (1-888-774-7325) out of business hours. The SeaLife Center's message machine is checked regularly, and you will be instructed what to do next.

If you would like to know more about the specifics of this sea otter mortality event go to the U.S. Fish & Wildlife Service's web site.

For more information please contact:
U.S. Fish & Wildlife Service
Marine Mammals Management Office
1011 East Tudor Road
Anchorage, AK 99503
907/786 3800
800/362 5148

Visit the Marine Mammals Management
home page at:
<http://alaska.fws.gov/fisheries/mmm/index.htm>

Photos courtesy of Michelle Staedler,
Monterey Bay Aquarium, and U.S. Fish and
Wildlife Service